P15318 Imagine RIT Vision

Best Case Scenario

We have a fully functioning Prototype completed before Imagine RIT. There are two main concepts to illustrate at our booth. The first is our ability to control flow rate. This will be done by having our device hooked up to a flow meter and is controlled via programmed PWM's. An alternative would be to set up a game in which the spectator steps on a pedal to go through a range of mass flow rates to demonstrate how the prototype would work in a car. The second concept is the ability of our distribution plate to efficiently mix air and fuel. This will be done by flowing water through the distribution plate to show the swirling effect since air/smoke would be difficult to see. We would also have a poster breaking up major design components through MSD. We would also explain what the benefits of this system would be, and its conception in the first place using natural gas and gasoline in a bi-fuel powered vehicle.

Moderate Case Scenario

We have either a partially working prototype or cannot obtain equipment needed to do live demonstration of the flow rate. In this case we would use CAD models and videos of the device being tested to convey are message. We may still be able to do the live demonstration of the fuel mixing process, assuming we can obtain access to a water source. We will still explain the benefits of the system, and its conception using natural gas and gasoline in a bi-fuel powered vehicle.

Worst Case Scenario

We do not have a working prototype that is even partially capable of a demonstration of flow control. From this, we would use CAD, Posters, and modelling to portray what we should expect when the prototype is functioning. We would focus on identifying problems, how to correct or avoid them, and what needs to be completed in the next phase of the project. We will still explain the benefits of the system, and its conception using natural gas and gasoline in a bi-fuel powered vehicle.